



**Aviation Safety Risk  
Analysis Program**

**DEVELOPMENT OF REQUIREMENTS FOR  
SUBSTANTIAL MAINTENANCE  
MONITORING**

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# **DEVELOPMENT OF REQUIREMENTS FOR SUBSTANTIAL MAINTENANCE MONITORING**

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In 1996 the FAA Administrator announced a six-point program that outlined improvements to inspection policies. During this press release the term substantial maintenance was used to identify areas of maintenance, which were currently being outsourced by airlines to certified repair stations. The term substantial maintenance is not included within the Federal Aviation Regulations definitions and subsequently was defined and identified through Flight Standards policy, initially with HBAW 96-05.

During the development of HBAW 96-05 the current requirement of having air carriers list their contractors within their General Maintenance Manual (GMM) was decomposed and a policy designed which identified four (4) major areas which were considered to constitute substantial maintenance. These are were;

- Any activity involving C-check or greater maintenance visit,
- Any engine maintenance, which requires case-separation, or tear down,
- Any major repair or alteration performed on airframes, engines or propellers, and
- Any off aircraft maintenance, alteration or major repairs of required emergency equipment.

These areas would now have to be specifically annotated on the air carrier's operations specifications under Part D-91. Limiting only the above categories to operations specifications was decided for two reasons, first the four areas would be deemed the most critical for safety of flight and secondly, most large carriers have upwards of 1200-1500 contractors that are used in the overall performance of maintenance. The voluminous size would be work intensive should it be required to be placed on operations specifications.

There were additional requirements placed on the carrier in order to comply with the above. The carrier, under its continuous analysis and surveillance program (CASP), would have to audit each of the substantial maintenance providers to ascertain their compliance status under Part 121, Subpart L, and its understanding of the carriers maintenance program requirements. This was mandated for both current providers and any company that was being considered for contracts, prior to adding them under D-91. Additionally, the carrier could not use CASE audits for this initial audit. CASE could only be used after the carrier had established the maintenance provider's posture.

Flight Standards inspectors also had additions to their work programs. Along with the carrier being required to conduct the initial audit the PMI for the carrier was required to perform his/her audit to ensure the status of the maintenance provider prior to approving the contractors onto the operations specifications.

NOTE: One important outcome of this HBAW was it seemed to correct problems that had been identified with the current bilateral agreement with Canada under Part 43.17. Past FAA/TCA/JAA harmonization negotiations had uncovered gaps in application of the 1988 maintenance implementation procedures documents and questions concerning the monitoring and surveillance of Canadian Aircraft Maintenance Organizations (AMO) surfaced. This bulletin guaranteed, at least for the Part 121 segment of the industry, that both the air carrier and the FAA had access to ensure compliance with the FARs at these locations. If the AMO did not allow FAA inspectors to conduct audits the carrier was prohibited from using that AMO.

Currently there are two projects on going that has a direct affect on the substantial maintenance issue. The first is the automation of the maintenance operations specifications and secondly is the AFS-300 requirement to identify high tech or very complex functions performed under Part 145, which should be viewed differently during certification or surveillance.